DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As below named inventors, we hereby declare that:

Our residence, post office address and citizenship are as stated below under our names.

We believe that we are the original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled

A CRYSTAL OF BACTERIAL CORE RNA POLYMERASE AND METHODS OF **USE THEREOF**

the Specifica	tion of which	
[]	is attached hereto	
[X]	was filed on September 15, 19	99
	as Application Serial No. 09/3	96,651
	and was amended on	(if applicable).
		-

We hereby state that we have reviewed and understand the contents of the aboveidentified Specification, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, 1.56(a).

We hereby claim foreign priority benefits under Title 35, United States Code, §119 of any provisional application filed in the United States in accordance with 35 U.S.C. §1.119(e), or any application for patent that has been converted to a Provisional Application within one (1) year of its filing date, or any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

PRIOR FILED APPLICATION(S) APPLICATION **COUNTRY** NUMBER

(DAY/MONTH/YEAR FILED)

PRIORITY **CLAIMED**

We hereby claim the benefit under Title 35, United States Code, §120 of any United States application listed below, and, insofar as the subject matter of each of the claims of this application is not disclosed in any prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a), which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION NO.

FILING DATE (DAY/MONTH/YEAR)

STATUS - PATENTED, PENDING, ABANDONED

We hereby appoint as our attorneys or agents the following persons: Jack Matalon, (Attorney, Registration No. 22,441); Stefan J. Klauber (Attorney, Registration No. 22,604); David A. Jackson (Attorney, Registration No. 26,742); Donald J. Cox, Jr. (Attorney, Registration No. 37,804); Michael D. Davis (Attorney, Registration No. 39,161); Christine E. Dietzel (Agent, Registration No. 37,309); and Michael A. Yamin (Agent, Registration No. 44,414), said attorneys or agents with full power of substitution and revocation to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Please address all correspondence regarding this application to:

DAVID A. JACKSON, ESQ. KLAUBER & JACKSON 411 HACKENSACK AVENUE HACKENSACK, NEW JERSEY 07601

Direct all telephone calls to David A. Jackson at (201) 487-5800.

We hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

FULL NAME OF FIRST JOINT INVENTOR:	Seth A. Darst	
COUNTRY OF CITIZENSHIP:	United States	
FULL RESIDENCE ADDRESS:	500 East 63rd Street, Apt. 16J New York, NY 10021	
FULL POST OFFICE ADDRESS:	500 East 63rd Street, Apt. 16J New York, NY 10021	

DATE _____

FULL NAME OF SECOND JOINT INVENTOR:	Gongyi Zhang
COUNTRY OF CITIZENSHIP:	People's Republic of China
FULL RESIDENCE ADDRESS:	c/o National Jewish Medical & Research Center
	1400 Jackson Street, K520 Denver, CO 80206
FULL POST OFFICE ADDRESS:	c/o National Jewish Medical & Research Center
	1400 Jackson Street, K520 Denver, CO 80206
SIGNATURE OF INVENTOR	
DATE	
FULL NAME OF THIRD JOINT INVENTOR:	Elizabeth Campbell
COUNTRY OF CITIZENSHIP:	United States
FULL RESIDENCE ADDRESS:	500 East 63rd Street, Apt. 16J New York, NY 10021
FULL POST OFFICE ADDRESS:	500 East 63rd Street, Apt. 16J New York, NY 10021
SIGNATURE OF INVENTOR	
DATE	

FULL NAME OF FOURTH JOINT INVENTOR: Leonid Minakin

COUNTRY OF CITIZENSHIP:

Russia

FULL RESIDENCE ADDRESS:

190 Frelinghuysen Road Piscataway, NJ 08854

FULL POST OFFICE ADDRESS:

190 Frelinghuysen Road Piscataway, NJ 08854

SIGNATURE OF INVENTOR

FULL NAME OF FIFTH JOINT INVENTOR:

Konstantin Severinov

COUNTRY OF CITIZENSHIP:

Russia

FULL RESIDENCE ADDRESS:

114 Bayard Street, #3

New Brunswick, NJ 08903

FULL POST OFFICE ADDRESS:

114 Bayard Street, #3

New Brunswick, NJ 08903

415 Valentine Street Highland Park NY 08904

Sevenia W SIGNATURE OF INVENTOR

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As below named inventors, we hereby declare that:

Our residence, post office address and citizenship are as stated below under our names.

We believe that we are the original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled

A CRYSTAL OF BACTERIAL CORE RNA POLYMERASE AND METHODS OF USE THEREOF

the Specifica	tion of which	
[]	is attached hereto	
[X]	was filed on September 15, 199	9
	as Application Serial No. 09/39) 6,651
	and was amended on	(if applicable).

We hereby state that we have reviewed and understand the contents of the aboveidentified Specification, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, 1.56(a).

We hereby claim foreign priority benefits under Title 35, United States Code, §119 of any provisional application filed in the United States in accordance with 35 U.S.C. §1.119(e), or any application for patent that has been converted to a Provisional Application within one (1) year of its filing date, or any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

APPLICATION COUNTRY (DAY/MONTH/YEAR FILED) PRIORITY
NUMBER CLAIMED

We hereby claim the benefit under Title 35, United States Code, §120 of any United States application listed below, and, insofar as the subject matter of each of the claims of this application is not disclosed in any prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a), which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION NO.

FILING DATE (DAY/MONTH/YEAR)

STATUS - PATENTED, PENDING, ABANDONED

We hereby appoint as our attorneys or agents the following persons: Jack Matalon, (Attorney, Registration No. 22,441); Stefan J. Klauber (Attorney, Registration No. 22,604); David A. Jackson (Attorney, Registration No. 26,742); Donald J. Cox, Jr. (Attorney, Registration No. 37,804); Michael D. Davis (Attorney, Registration No. 39,161); Christine E. Dietzel (Agent, Registration No. 37,309); and Michael A. Yamin (Agent, Registration No. 44,414), said attorneys or agents with full power of substitution and revocation to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Please address all correspondence regarding this application to:

DAVID A. JACKSON, ESQ. KLAUBER & JACKSON 411 HACKENSACK AVENUE HACKENSACK, NEW JERSEY 07601

Direct all telephone calls to David A. Jackson at (201) 487-5800.

We hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

FULL NAME OF FIRST JOINT INVENTOR: Seth A. Darst

COUNTRY OF CITIZENSHIP: United States

FULL RESIDENCE ADDRESS: 500 East 63rd Street, Apt. 16J

New York, NY 10021

FULL POST OFFICE ADDRESS: 500 East 63rd Street, Apt. 16J

New York, NY 10021

SIGNATURE OF INVENTOR

DATE 11/29/99

FULL NAME OF SECOND JOINT INVENTOR:	Gongyi Zhang
COUNTRY OF CITIZENSHIP:	People's Republic of China
FULL RESIDENCE ADDRESS:	c/o National Jewish Medical & Research Center 1400 Jackson Street, K520 Denver, CO 80206
FULL POST OFFICE ADDRESS:	c/o National Jewish Medical & Research Center 1400 Jackson Street, K520 Denver, CO 80206
SIGNATURE OF INVENTOR	
FULL NAME OF THIRD JOINT INVENTOR:	Elizabeth Campbell
COUNTRY OF CITIZENSHIP:	United States
FULL RESIDENCE ADDRESS:	500 East 63rd Street, Apt. 16J New York, NY 10021
FULL POST OFFICE ADDRESS:	500 East 63rd Street, Apt. 16J New York, NY 10021
SIGNATURE OF INVENTOR	
DATE NOU 29, 1999	





FULL NAME OF FOURTH JOINT INVENTO	OR: <u>Leonid Minakin</u>
COUNTRY OF CITIZENSHIP:	Russia
FULL RESIDENCE ADDRESS:	190 Frelinghuysen Road Piscataway, NJ 08854
FULL POST OFFICE ADDRESS:	190 Frelinghuysen Road Piscataway, NJ 08854
SIGNATURE OF INVENTOR	
DATE	Konstantin Severinov
COUNTRY OF CITIZENSHIP:	Russia
FULL RESIDENCE ADDRESS:	114 Bayard Street, #3 New Brunswick, NJ 08993
FULL POST OFFICE ADDRESS:	114 Bayard Street, #3 New Brunswick, NJ 08903
SIGNATURE OF INVENTOR	
DATE	

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As below named inventors, we hereby declare that:

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We believe that we are the original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled

A CRYSTAL OF BACTERIAL CORE RNA POLYMERASE AND METHODS OF USE THEREOF

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PRIOR FILED APPLICATION(S) ON COUNTRY (DAY/MONTH/YEAR FILED)	PRIORITY CLAIMED
	is attached hereto was filed on as Application Serial No. and was amended on

We hereby claim the benefit under Title 35, United States Code, §120 of any United States application listed below, and, insofar as the subject matter of each of the claims of this application is not disclosed in any prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a), which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

DATE

APPLICATION NO.

FILING DATE (DAY/MONTH/YEAR)

STATUS - PATENTED, PENDING, ABANDONED

We hereby appoint as our attorneys or agents the following persons: Jack Matalon, (Attorney, Registration No. 22,441); Stefan J. Klauber (Attorney, Registration No. 22,604); David A. Jackson (Attorney, Registration No. 26,742); Donald J. Cox, Jr. (Attorney, Registration No. 37,804); Michael D. Davis (Attorney, Registration No. 39,161); Christine E. Dietzel (Agent, Registration No. 37,309); and Michael A. Yamin (Agent, Registration No. 44,414), said attorneys or agents with full power of substitution and revocation to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

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DAVID A. JACKSON, ESQ. KLAUBER & JACKSON 411 HACKENSACK AVENUE HACKENSACK, NEW JERSEY 07601

Direct all telephone calls to David A. Jackson at (201) 487-5800.

We hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

FULL NAME OF FIRST JOINT INVENTOR:	Seth A. Darst
COUNTRY OF CITIZENSHIP:	United States
FULL RESIDENCE ADDRESS:	500 East 63rd Street, Apt. 16J New York, NY 10021
FULL POST OFFICE ADDRESS:	500 East 63rd Street, Apt. 16J New York, NY 10021
SIGNATURE OF INVENTOR	

FULL NAME OF SECOND JOINT INVENTOR:	Gongyi Zhang
COUNTRY OF CITIZENSHIP:	People's Republic of China
FULL RESIDENCE ADDRESS:	c/o National Jewish Medical & Research Center 1400 Jackson Strett, K520 Denver, CO 80206
FULL POST OFFICE ADDRESS:	c/o National Jewish Medical & Research Center 1400 Jackson Strett, K520 Denver, CO 80206
SIGNATURE OF INVENTOR	
D A MIC	

ASSIGNMENT

WHEREAS, WE,

Seth A. Darst, a citizen of United States, residing at 500 East 63rd Street, Apt. 16J
New York, NY 10021;

Gongyi Zhang, a citizen of People's Republic of China, residing at c/o National Jewish Medical & Research Center 1400 Jackson Street, K520

Denver CO 80206; and

Elizabeth Campbell, a citizen of the United States, residing at 500 East 63rd Street, Apt. 16J
New York, NY 10021;

have invented certain new and useful improvements in

A CRYSTAL OF BACTERIAL CORE RNA POLYMERASE AND METHODS OF USE THEREOF

for which we have filed an Application for Letters Patent in the United States on September 15, 1999, and was accorded U.S. Serial No. 09/396,651; and

WHEREAS,

THE ROCKEFELLER UNIVERSITY.

an education corporation organized and existing under the laws of the State of New York, with office at 1230 York Avenue, New York, NY 10021-6399,

ASSIGNEE, is desirous of obtaining the entire right, title and interest in, to and under the said improvements and the said application;

NOW, THEREFORE, for other good and valuable consideration, the receipt of which is hereby acknowledged, we the said

SETH A. DARST; GONGYI ZHANG; AND ELIZABETH CAMPBELL

have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, to the said

THE ROCKEFELLER UNIVERSITY,

its successors, legal representatives and assigns, the entire right, title and interest in, to and under the said improvements, and the said application and all divisions, renewals, and continuations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which

may hereafter be filed for said improvements in any country or countries foreign to the United States, including the right to claim priority under the terms of any appropriate International Convention based upon said application for Letters Patent of the United States, and all Letters Patent which may be granted from said improvements in any country or countries foreign to the United States and extensions, renewals and reissues thereof; and we hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States, whose duty is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to the said

THE ROCKEFELLER UNIVERSITY,

it successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant that we have full right to convey the interest herein assigned in the manner hereinabove set forth, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said

THE ROCKEFELLER UNIVERSITY,

its successors, legal representatives and assigns, any fact known to us respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisions, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid the said

THE ROCKEFELLER UNIVERSITY,

its successors, legal representatives and assigns, to obtain and enforce proper Patent Protection for said improvements in the United States.

IN TESTIMONY WHEREOF, we hereunto set our hand and seal the day and year set opposite our signatures.

L.S.

L.S.

Date 11/29	, 1999	
Date	-	SETH A. DARS I
	was the secretary	Section 1985 and 198
State of N \(\gamma \)	: : ss.	TERESA L. SOLOMON Notary Public, State of New York No. 31-4989836 Qualified in New York County
County of N	:	Commission Expires Dec. 16,
Before me this personally known to be instrument, and acknown the purposes therein	e the person who wledged to me that	1999, personally appeared Seth A. Darst, to me is described in and who executed the above at he/she executed the same of his/her own free wi
		NOTARY PUBLIC
(Affix Seal Here)		
Date <u>Opember</u>	<u>/</u> , 1999	GONGYI ZHANG
State of Colors County of Cons	do : :ss.	
County of Con	w:	
Refore me th	is day of	1999, personally appeared Gongyi Zhang, to me

personally known to be the person who is described in and who executed the above

instrument, and acknowledged to me that he/she executed the same of his/her own free will

(Affix Seal Here)

Before me this

for the purposes therein set forth.

the that the the their that it is the the the thin that the the that the the

MY COMMISSION EXPIRES: May 3, 2003

Deborot L. Case

Date Nov. 29, 19

5000

L.S.

ELIZABETH CAME

State of NJ

:ss.

TERESA L. SOLOMON
Notary Public, State of New York
No. 31-4989836
Qualified in New York County
Commission Expires Dec. 16,

Before me this day of 1999, personally appeared Elizabeth Campbell, to me personally known to be the person who is described in and who executed the above instrument, and acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.

NOTARY PUBLIC

(Affix Seal Here)

ASSIGNMENT

WHEREAS, WE,

Leonid Minakin, a citizen of Russia, residing at 190 Frelinghuysen Road Piscataway, NJ 08854; and

Konstantin Severinov, a citizen of Russia, residing at 114 Bayard Street New Brunswick, NJ 08093

have invented certain new and useful improvements in

A CRYSTAL OF BACTERIAL CORE RNA POLYMERASE AND METHODS OF USE THEREOF

for which we have filed an Application for Letters Patent in the United States on September 15, 1999, and was accorded U.S. Serial No. 09/396,651; and

WHEREAS, RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY, an education corporation organized and existing under the laws of the State of New York, with office at 58 Bevier Road, Piscataway, NJ 08854-8010,

ASSIGNEE, is desirous of obtaining the entire right, title and interest in, to and under the said improvements and the said application;

NOW, THEREFORE, for other good and valuable consideration, the receipt of which is hereby acknowledged, we the said

LEONID MINAKIN AND KONSTANTIN SEVERINOV

have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, to the said

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY,

its successors, legal representatives and assigns, the entire right, title and interest in, to and under the said improvements, and the said application and all divisions, renewals, and continuations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, including the right to claim priority under the terms of any appropriate International Convention based upon said application for Letters Patent of the United States, and all Letters Patent which may be granted from said improvements in any country or countries foreign to the United States and extensions, renewals and reissues thereof; and we hereby authorize and

request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States, whose duty is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to the said

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY,

it successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant that we have full right to convey the interest herein assigned in the manner hereinabove set forth, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY.

its successors, legal representatives and assigns, any fact known to us respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisions, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid the said

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY,

its successors, legal representatives and assigns, to obtain and enforce proper Patent Protection for said improvements in the United States.

IN TESTIMONY WHEREOF, we hereunto set our hand and seal the day and year set opposite our signatures.

Date <u>Dec. /</u> , 1999	L.S
	LEONID-MINAKIN
State of New Jewys	
State of New Jewys: ss. County of Middlesey:	
ja –	
personally known to be the person who is	999, personally appeared Leonid Minakin, to me described in and who executed the above he/she executed the same of his/her own free will
	Lord in nichol.
	NOTARY PUBLIC LOREL M. NICHOL NOTARY PUBLIC OF NEW JERSEY My Commission Expires Nov.10, 2003
(Affix Seal Here)	
Date <u>Mec./</u> , 1999	L.S. KONSTANTIN SEVERINOV
	ACTOTALITATION TO TELEPOOR
State of MUNDERALLA	
State of New Jersey County of Meddleast: ss.	

Before me this \(\) day of \(\lambda \) c. 1999, personally appeared Konstantin Severinov, to me personally known to be the person who is described in and who executed the above instrument, and acknowledged to me that he/she executed the same of his/her own free will for the purposes therein set forth.

NOTARY PUBLIC

LOREL M. NICHOL
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires Nov 10, 2003

(Affix Seal Here)